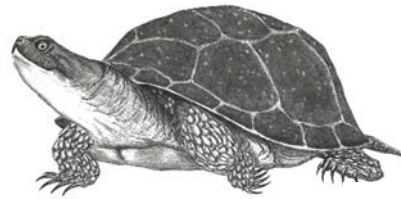

The NYSDEC Endangered Species Program: Public Awareness and Support



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This publication is one of a series of reports resulting from investigations dealing with public issues in environmental and natural resources management. The Human Dimensions Research Unit (HDRU) in the Department of Natural Resources at Cornell University studies the social and economic aspects of natural resources and the environment and the application of social and economic insights in management planning and policy. A list of HDRU publications may be obtained by accessing our website at: <https://hdru.dnr.cornell.edu>.



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EXECUTIVE SUMMARY

The New York State Department on Environmental Conservation (NYSDEC) is charged with managing and protecting the fish and wildlife resources of New York State (NYS). The staff of the Endangered Species Program within NYSDEC asked the Human Dimensions Research Unit at Cornell University to undertake a study to assess the level of awareness of threatened and endangered (T/E) species among New York residents and licensed hunters and anglers (a key stakeholder group). The staff also were interested in understanding the level of awareness, knowledge, and support for the Endangered Species Program, and factors that might influence that support.

For each study audience (New York residents, hunters, anglers), the specific objectives of the study were to:

1. Assess awareness of T/E species.
2. Assess awareness of NYSDEC's Endangered Species Program.
3. Assess support for the program.
4. Identify factors influencing support for the program.
5. Identify factors influencing support for listing and delisting decisions made under the program.
6. Identify factors influencing support for management actions that could be implemented under the program.
7. Assess if awareness, knowledge, and support differ by socio-demographic characteristics, landownership, outdoor recreation participation, level of environmental concern, and exposure to restoration actions.

The study was conducted in two stages, with a screening telephone interview conducted in February and March 2017 to identify New York (NY) residents (stratified upstate and downstate [NYC and Long Island]) with some awareness of T/E species. In the interview we sought information on awareness of T/E species and NYSDEC's Endangered Species Program from this sample of NY residents. This was followed by a web/mail survey sent in April 2017 to screening interview respondents who were aware of T/E species and a separate sample of 2,000 licensed hunters and anglers. Due to a lower than anticipated response to the follow-up survey from the downstate sample, the number of downstate respondents to the follow-up survey was not sufficient for combining downstate and upstate residents to do a NY statewide analysis. Therefore, follow-up survey results are reported for upstate residents only.

From the screening telephone interview, which had a sufficient sample size for statewide analysis, we found 93% of New York State residents were aware of the terms "threatened species" or "endangered species." The depth of their perceived knowledge though was limited, with just over 10% indicating they knew "a lot" about T/E species. Most NY residents (81%), hunters (91%), and anglers (93%) indicated they knew "very little" or "something" about T/E species. Three-quarters of upstate residents and 61-71% of hunters and anglers strongly support educational activities at sites where T/E species live. This suggests that education and outreach programs to further inform New Yorkers about T/E species might be welcome, and have potential to increase the number of people knowledgeable about T/E species.

Awareness among NY residents of NYSDEC's efforts specifically to protect T/E species was low, with 32% not at all aware and 41% somewhat aware of the T/E species program. Therefore, at least three-quarters of New Yorkers might value additional information about the program. We do not know whether it would be beneficial to increase information and education about the program, but we do know that of those upstate residents who were aware, 45% were satisfied with NYSDEC's efforts to protect T/E species in NYS, very few were dissatisfied, and many were neutral or did not have an opinion.

Hunters and anglers, as key stakeholder groups, were far more likely to be aware of NYSDEC's efforts to protect T/E species (50% and 46%, respectively, were very aware), and almost half of those who were aware of the program (50% of hunters, 45% of anglers) were satisfied with efforts to protect T/E species in NYS. Only 10% were dissatisfied.

From the follow-up survey, we found overall satisfaction with NYSDEC's efforts to protect T/E species was highest among those who: a) thought NYSDEC devoted enough resources toward protecting T/E species, b) made good decisions about which species to protect and which actions to take to protect T/E species, c) involved the public adequately in making those decisions, and d) trusted NYSDEC to make good decisions. Since overall satisfaction was correlated with people believing there was adequate public involvement in decision-making and current percentages of people believing public involvement is adequate are low (27-34%), continuing to involve the public, and perhaps increasing efforts to make them aware of the program and opportunities for public involvement in decision making, might contribute to overall satisfaction.

When we examined factors people might consider to be important in listing/delisting decisions, we found all taxonomic groups were considered equally important to protect (62-80% thought all taxonomic groups were very important to protect). Three-quarters of people also thought species found mostly in NYS and nowhere else were very important to protect. People were much less likely to support species protection under other circumstances. If a species is threatened or endangered in New York but common elsewhere far fewer people, especially upstate residents (27%), thought it was very important to protect them. If private property owners would be restricted on what they could do on their land in order to protect a species, only about one-third of hunters, anglers, and upstate residents thought it was still very important to protect the species.

Respondents had diverse opinions about whether T/E species should be protected no matter what the cost. About 40% of hunters, anglers, and upstate residents thought they should be protected no matter the costs, and about one-third thought they should not. They were more in agreement that species should not be allowed to go extinct, with three-quarters of hunters, anglers, and upstate residents indicating that it is not OK to let some species become extinct.

When making decisions about actions to take to protect T/E species, many upstate residents (75%), hunters (67%), and anglers (73%) thought it was very important that NYSDEC consider the opinions of scientists who work with T/E species. Over half (53%) of upstate residents thought it was very important that NYSDEC consider the opinions of environmental groups like Audubon or The Nature Conservancy. Fewer hunters and anglers thought it was very important to consider the opinions of environmental groups (38-41%).

Some specific management actions to protect or restore T/E species garnered general support from hunters, anglers, and upstate residents. Actions that were supported by over 50% of respondents included: 1) improving habitat for T/E species on *public* lands, 2) improving habitat on *private* lands, and 3) fining those who harm T/E species or their habitats. Fewer hunters, and to a lesser extent anglers and upstate residents, were willing to support actions that partially restrict access or development of land, such as blocking public access to an area for part of the year. The most restrictive actions (e.g., closing an area to all public access, restricting landowners' use of their property) were not supported at all by 13-23% of respondents. When asked about actions that would impact use of their own land though, people who owned an acre or more were more willing (over 90%) to consider following a conservation plan to maintain habitat for T/E wildlife on their property. Offering a financial incentive did not seem to increase the degree of willingness to participate (e.g., move from "willing" to "very willing"). Most respondents (over 90%) also supported the reintroduction of T/E wildlife to its historical range if that was near their property. These findings suggest a willingness of landowners to protect habitat for T/E species on their land, at least in the abstract.

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INTRODUCTION

The New York State Department of Environmental Conservation (NYSDEC) is charged with managing and protecting the fish and wildlife resources of New York State (NYS). To do this, NYSDEC sets regulations and policies to conserve crucial habitats and protect fish and wildlife resources. Within NYSDEC, the Endangered Species Program is “designed to find and correct fish or wildlife problems before certain species are gone forever.” Their mission statement says: “To perpetuate and restore native animal life within New York State for the use and benefit of current and future generations, based upon sound scientific practices and in consideration of social values, so as not to foreclose these opportunities to future generations” (<http://www.dec.ny.gov/animals/7181.html>).

To aid in fulfilling their mission, the staff of the Endangered Species Program asked the Human Dimensions Research Unit (HDRU) at Cornell University to undertake a study to assess the level of awareness of threatened and endangered (T/E) species among New York residents and members of key stakeholder groups. They also were interested in understanding the level of awareness, knowledge, and support for the Endangered Species Program, and factors that might influence that support. Such factors might include the value placed on T/E species restoration compared to other societal needs, perceived impacts of the program on individuals, society, and the environment, trust in NYSDEC to manage T/E species, and the degree of public involvement in decision making.

Support for two specific aspects of the program were examined in more detail. The first involved decisions NYSDEC makes to add species to the T/E list (i.e., listing) or remove species from the list (i.e., delisting). Factors that could influence support for these decisions might include the characteristics of the species, the process used to make the decision and the rationale for the decision. The second aspect was management actions NYSDEC might take to protect or restore T/E species. Factors that might influence support for these actions might include the impact of the decision on individuals, and the processes used to decide on and implement the actions.

The HDRU undertook the study early in 2017 to assess awareness and support of the program among New York (NY) residents and members of a key stakeholder group – licensed hunters and anglers. The study was conducted in two stages, with a screening telephone interview first to identify NY residents with some awareness of T/E species. This was followed by a web/mail survey to screening interview respondents who were aware of T/E species, and a separate sample of licensed hunters and anglers.

For each study audience (NY residents, hunters, anglers), the specific objectives of the study were to:

1. Assess awareness of T/E species.
2. Assess awareness of NYSDEC’s Endangered Species Program.
3. Assess support for the program.
4. Identify factors influencing support for the program.

5. Identify factors influencing support for listing and delisting decisions made under the program.
6. Identify factors influencing support for management actions that could be implemented under the program.
7. Assess if awareness, knowledge, and support differ by socio-demographic characteristics, landownership, outdoor recreation participation, level of environmental concern, and exposure to restoration actions.

METHODS

We surveyed two important audiences – New York residents and licensed hunters/anglers living in NYS. It was thought that state residents would be less familiar with T/E species than hunters/anglers, and therefore we used a two-stage approach in which we: (a) identified, via a telephone screening survey, NY residents with some level of awareness; and (b) conducted a more in-depth web/mail survey of these residents. Licensed hunters/anglers were assumed to be aware of T/E species and were all sent the more in-depth survey via mail.

Screening Survey for NY Residents

New York State was divided into two regions – New York City/Long Island (downstate) and the remainder of the state (upstate). The rationale for the stratification was to ensure sufficient sample sizes for estimates of awareness and support in each region.

The telephone sample was provided by the Marketing Systems Group. It was drawn from New York State telephone listings and also contained a cell phone sample. The sample was stratified by the two regions with a quota of 300 completed interviews set for the downstate region and 1,150 for the upstate region. The quota was lower in the downstate region because we knew it would be more difficult, and therefore, more costly to reach willing respondents from that region.

Screening interviews were conducted by telephone in February and March 2017. The first question respondents were asked was their age, and anyone under age 18 was not surveyed. The second question asked what county they lived in, resulting in their placement within a geographic region. Calling ceased when the quota of completed interviews was reached in each geographic region.

The screening survey included questions on awareness of T/E species (generally and for six specific species), support for T/E protection, and awareness of the NYSDEC program. It also included questions on participation in outdoor activities and a variety of socio-demographic characteristics that could be used to differentiate awareness and support among different sectors of the general public. At the end of the interview respondents who said “yes” they were aware of the terms “threatened species” or “endangered species” were asked to provide their email or mailing address, so that a more extensive follow-up survey could be sent to them. The full text of the screening survey is available in Appendix A.

In-depth Follow-up Survey

Respondents to the screening survey who were aware of the terms “threatened species” or “endangered species,” and who provided their email or mailing address were sent a follow-up survey. Two samples: one of 1,000 licensed hunters and one of 1,000 licensed anglers were sent a version of the follow-up survey that also included questions from the screening survey.

The follow-up survey was developed based on a literature review (e.g., Knight, 2008) and discussions with the staff of the NYSDEC Endangered Species Program. The survey included questions on awareness of T/E species from the screening survey for the hunter/angler sample, and questions for everyone on support for the program. The survey asked about factors that might influence support for the program in general, listing or delisting decisions, and implementation of management actions to protect or restore T/E species. The full text of the follow-up survey is available in Appendix B for NY residents and Appendix C for hunters/anglers.

The follow-up survey was implemented in April 2017 via email and mail. Up to four emails and a phone message were sent to non-respondents participating in the web portion of the follow-up survey to encourage their response. Up to three mailings were sent to non-respondents participating in the mail portion of the follow-up survey.

Analysis and Data Weighting

Data analysis was done using SPSS (IBM SPSS Statistics 24). Pearson’s chi-square test and Scheffe’s test were used to test for statistically significant differences between regions and audiences at the $P \leq 0.05$ level. Correlation analysis was used to identify relationships between program support and factors potentially influencing that support. All correlation coefficients reported were significant at $P \leq 0.01$.

Principal component factor analysis with varimax rotation was used to group items into survey scales associated with: 1) public policy issues of concern, 2) reasons to protect T/E species, and 3) core environmental beliefs. The reliability of each of these scales was tested using Cronbach’s alpha. The items in a scale were combined, by taking their average, into one variable that was used in the correlation analysis.

Comparisons on key socio-demographic characteristics were made between respondents to the screening survey and the NYS population. Comparisons were also made between those who responded to the follow-up survey and those who did not, using questions from the screening survey to determine the extent of any response bias.

Data reported by region are unweighted and reflect the number of people who responded from that region. Data reported about New York State residents as a whole from the screening survey was weighted in proportion to the population in each region from which the sample was drawn.

RESULTS AND DISCUSSION

Survey Response

Screening Survey

Over 60% of households contacted completed the screening survey (Table 1). The refusal rate was 21%. The percentage who could not be interviewed because no one in the household spoke English was higher in the downstate region (12%) compared to the upstate region (2%). The number of interviews completed was sufficient for analysis of each region independently, and for comparisons between regions.

Table 1. Screening survey response rate by region and overall.

Regions	# of Households Contacted	# of Interviews Completed	% Completed	% Refused	% Language Problem	% Ineligible*
Downstate	590	300	51	20	12	17
Upstate	1,769	1,150	65	21	2	12
Overall	2,359	1,450	61	21	5	13

*Non-residential number, did not live in New York State, deceased.

Interviewees generally reflected the statewide population from which they were drawn. Slightly over half of the state population is female (52%) (https://www.health.ny.gov/statistics/vital_statistics/2010/table01.htm) compared to 56% of our interviewees. Seventy percent of NY residents are white (<https://www.census.gov/quickfacts/NY>) compared with 71% of our sample. Interviewees tended to be older, with 53% aged 50+ compared with the most recent statewide estimates showing 43% aged 50+ (<https://suburbanstats.org/population/how-many-people-live-in-new-york>).

Follow-up Web/Mail Survey

Among those in the NY resident sample eligible to participate in the follow-up survey, by virtue of their being aware of T/E species and providing contact information, 40% responded to either the web or mail version of the survey (Table 2). The response rate in the downstate region was lower than we expected (18%), leaving us with a sample size for that region (n=26) too small to represent downstate residents in a combined statewide analysis (downstate and upstate). Therefore, analysis from the follow-up survey was done only for upstate residents in contrast with the screening survey, through which we were able to characterize all NY residents.

Hunters and anglers responded to the survey at similar rates (30-33%). The number of respondents from the hunter and angler samples was sufficient for analysis of each group, and for comparisons with: (a) the statewide resident sample for questions from the screening survey, and (b) the upstate resident sample for questions from the follow-up survey.

Table 2. Follow-up web/mail survey response rate by survey audience, survey method, and region.

	NY Residents					Hunters	Anglers
	Overall	Web	Mail	Upstate	Downstate		
Initial eligible sample	875	656	219	716	159	1000	1000
Undeliverable	84	74	10	69	15	53	42
Responded	319*	233	86	292	26	281	317
Response rate (adjusted for undeliverables)	40.3	40.0	41.1	45.1	18.1	29.7	33.1

*Includes one respondent who removed their identification number so region of residence within NYS could not be determined.

We compared NY residents who responded to the follow-up survey with those who did not respond to assess representativeness. Respondents were on average three years older than non-respondents, but the proportion who were male versus female did not differ. Respondents were more likely than non-respondents to indicate that they knew at least something about T/E species generally (64% vs. 53%), and similarly they were more likely to know something about five of the six specific species we asked about. They were also more likely to have participated in the following outdoor activities in the past year compared with non-respondents – hiking, camping, boating, and birdwatching. They were not more likely to have gone hunting or fishing. There were no differences in the level of importance they placed on the government protecting T/E species, with the majority of both groups thinking it was very important to do so. Respondents were more likely than non-respondents to indicate that they were very aware that the government took action to protect T/E species (40% vs. 33%) and that NYSDEC specifically had a program to protect T/E species (36% vs. 26%). In summary, respondents to the follow-up survey were more aware of T/E species and programs to protect them, but were not more likely to think it was very important to protect them. We did not adjust any of our respondent data presented below to reflect these differences.

Survey Audience Characteristics

The NY resident sample was similar in age to the hunter and angler samples, with a mean age of 51-53 years old but that was the only socio-demographic characteristic they all had in common (Table 3). As expected, hunters and anglers were more likely to be men, white, and live in rural areas than the general population of NY. Based on the follow-up survey, they were also less likely to have a college degree, and more likely to have conservative political leanings than the upstate residents of NY. Within the NY resident sample, downstate respondents were more likely to live in urban areas, be women and be more racially diverse than upstate respondents.

Table 3. Socio-demographic characteristics of NY resident, hunter, and angler respondents.

Socio-demographic Characteristics	NY Residents			Hunters	Anglers
	Overall	Upstate	Downstate		
Mean Age ^d	51	53	49	53	53
	Percent				
Gender ^{a, b, d}					
Male	44.4	50.3	40.0	89.3	90.5
Female	55.6	49.7	60.0	10.7	9.5
Race					
White ^{a, b, d}	71.2	87.0	59.0	96.3	96.7
Black or African American ^{a, b, d}	11.1	6.5	14.7	0.4	0.7
Hispanic ^{a, b, d}	10.8	4.1	16.0	1.1	2.3
Asian ^{a, b, d}	7.7	3.9	10.6	1.1	1.0
American Indian	2.2	2.8	1.7	3.4	3.3
Other	2.3	0.7	3.4	2.2	0.3
Primary residence ^{a, b, d}					
Urban	35.7	16.1	50.7	10.2	9.6
Suburban	44.5	46.2	43.3	28.5	33.9
Rural	19.8	37.7	6.0	61.3	56.5
<i>Among those aware of T/E species:</i>					
Education level ^{c, e, f}					
Less than high school	ins	1.6	ins	3.3	3.2
High school diploma	ins	9.2	ins	29.3	18.5
Some college or technical school	ins	21.5	ins	29.7	31.6
Associates degree	ins	9.2	ins	13.4	12.7
College degree	ins	24.7	ins	13.8	19.7
Graduate or professional degree	ins	33.8	ins	10.5	14.3

Table 3 (cont.)

Socio-demographic Characteristics	Percent				
	NY Residents			Hunters	Anglers
	Overall	Upstate	Downstate		
Political Leaning ^{e, f}					
Very liberal	ins	12.0	ins	2.3	1.3
Somewhat liberal	ins	21.2	ins	6.8	10.3
Moderate / Middle of the road	ins	37.2	ins	39.7	39.6
Somewhat conservative	ins	20.8	ins	35.0	36.3
Very conservative	ins	8.8	ins	16.2	12.5

^aStatistically significant difference between NY residents overall and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between NY residents overall and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

^dStatistically significant difference between upstate and downstate residents at P=0.05 using t-test (for means) and chi-square test (for percentages).

^eStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^fStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

ins- Question was asked on follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

Over half of the NY resident and almost three-quarters of the hunter and angler respondents participated in birdwatching in the past year (Table 4). Two-thirds of hunters and three-quarters of anglers indicated they participated in hiking and boating, whereas about one-third of NY residents indicated they participated in those activities. Upstate residents were more likely to participate in all of the outdoor activities we inquired about compared with downstate residents.

Almost all hunters (i.e., hunting license holders) indicated they went hunting in the past year, and over 90% of anglers (i.e., fishing license holders) indicated they went fishing (Table 4). Three-quarters of each group also participated in the other activity (i.e., hunters went fishing, anglers went hunting).

From the follow-up survey we found that few people (16% of upstate residents, 25% of hunters, and 23% of anglers) believed they had the experience of being prevented from going into an area because it was closed to protect T/E species. We asked this question because we did not know if being denied access to an area would result in negative views about T/E species, or NYSDEC's efforts to protect them. Ultimately, we did not find this to be the case.

Table 4. Percentages of NY residents, hunters, and anglers participating in various outdoor recreation activities in the past year.

Participation in Outdoor Recreation Activities	Percent Participating in Past Year				
	NY Residents			Hunters	Anglers
	Overall	Upstate	Downstate		
Birdwatching ^{a, b, d}	51.5	62.8	42.8	70.9	73.3
Hiking ^{a, b, c, d}	37.4	50.3	27.4	68.3	75.9
Boating (either motorized or non-motorized) ^{a, b, c, d}	37.0	43.2	32.3	64.0	75.6
Fishing ^{a, b, c, d}	25.7	32.4	20.7	78.4	90.8
Camping ^{a, b, d}	20.8	31.9	12.3	54.3	58.4
Hunting ^{a, b, c, d}	9.0	15.6	4.0	96.8	74.9

^aStatistically significant difference between NY residents overall and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between NY residents overall and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

^dStatistically significant difference between upstate and downstate residents at P=0.05 using chi-square test.

In the follow-up survey, we were able to assess respondent's core environmental beliefs by asking about their level of agreement with statements such as "humans must live in harmony with nature in order to survive" and "humankind was created to rule over the rest of nature," as described by Stedman (2004) and Knight et al. (2008). We identified two domains within respondents' core environmental beliefs, an ecological domain (including statements such as "humans must live in harmony with nature in order to survive" and "the balance of nature is very delicate and easily upset") and an economic/human domain (including statements such as "plants and animals exist primarily to be used by humans" and "humans have the right to modify the natural environment"). We found that most hunters, anglers, and upstate residents had strong positive core beliefs in the ecological domain and less so in the economic/human domain (Table 5). All groups had a mean score on the "agree" to "strongly agree" end of the scale for the three variables measuring core ecological beliefs. In other words, most respondents thought humans must live in harmony with nature in order to survive, and disagreed with the statement that humankind was created to rule over the rest of nature. Upstate residents were more likely to

disagree with the economic/human beliefs than hunters. One item included among the economic/human beliefs that suggests that “the best government is the one that governs the least” had an average score of neutral, suggesting respondents encompassed the range of agreement and disagreement with the statement.

Table 5. Core environmental beliefs of upstate residents*, hunters, and anglers.

Core beliefs	Mean agreement/disagreement**		
	Upstate residents	Hunters	Anglers
Ecological			
Humans must live in harmony with nature in order to survive	4.43	4.29	4.36
The balance of nature is very delicate and easily upset	4.13	4.02	4.08
When humans interfere with nature, it often produces disastrous consequences	3.94	3.74	3.75
Economic/human			
Most environmental problems can be solved by applying more and better technology ^a	2.98	3.27	3.18
The best government is the one that governs the least ^a	3.04	3.32	3.14
Humans have the right to modify the natural environment	2.79	2.72	2.71
Plants and animals exist primarily to be used by humans ^a	2.26	2.63	2.47
Humankind was created to rule over the rest of nature ^a	2.02	2.32	2.26

* Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

**Agreement was measured on a scale where 1= strongly disagree to 5= strongly agree.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using Scheffe’s test.

Awareness of T/E Species

We found that almost all NY residents (93%) were aware of the terms “threatened species” or “endangered species” (Table 6). Slightly more upstate residents compared to downstate residents were aware of the terms (Table 6). Just over 10%, though, felt they knew a lot about T/E species. Over 80% thought they knew “very little” or “something.” We assumed that hunters and anglers were aware of the terms “threatened species” or “endangered species,” and therefore did not ask them that question.

The follow-up survey was sent to only those residents who indicated they were aware of T/E species. In the follow-up survey, we asked upstate respondents again about their level of knowledge of T/E species. This time they gravitated toward the middle response option of “knowing something,” with almost two-thirds of them checking this option. Hunters and anglers responded similarly. Therefore, we can conclude that most New Yorkers have some level of awareness of T/E species, but it is likely their level of knowledge is not deep.

Table 6. General level of awareness and knowledge of T/E species among NY residents, hunters, and anglers.

	Percent				
	NY Residents				
General awareness of T/E species	Overall	Upstate	Downstate	Hunters	Anglers
Awareness/Knowledge ^d					
Never heard of “threatened species” or “endangered species”	7.2	4.8	9.0	na	na
Know very little about them	42.1	42.1	42.0	na	na
Know something about them	39.0	39.9	38.3	na	na
Know a lot about them	11.7	13.2	10.7	na	na
<i>If aware of T/E species:</i>					
How much do you know about New York State’s T/E species ^c					
Very little	ins	29.5	ins	22.1	31.5
Something	ins	65.3	ins	69.2	61.4
A lot	ins	5.2	ins	8.7	7.1

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

^dStatistically significant difference between upstate and downstate residents at P=0.05 using chi-square test.

na- Question not asked of hunters and anglers.

ins- Question was asked on follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

As a measure of knowledge and exposure to T/E species, we asked respondents in the screening survey about their level of knowledge for six different T/E species living in NYS, and whether they had ever seen them in the wild. (During the telephone interviews we asked the interviewers to emphasize the specific species name, encouraging people for example not to generalize from timber rattlesnake to any snake.) We found that most New Yorkers had heard of bald eagles, felt they knew something about them, and knew they lived in NYS in the wild (Figure 1 and Table 7). Upstate residents considered themselves slightly more knowledgeable than downstate residents. Over half of the upstate residents indicated they had seen a bald eagle in the wild in NYS, compared with only one-quarter of downstate residents. Almost 90% of hunters and anglers had seen a bald eagle in the wild.

Far fewer NY residents, hunters, and anglers knew about or had seen the other T/E species we asked about (Table 7). Lake sturgeon was the species with which people were next most familiar, with just under half of NY residents having heard of them and very few having seen them in the wild. Among hunters, and especially anglers, the percent knowing something about lake sturgeon was much higher (66-75%) compared with NY residents (20%), and they were more likely to have seen them in the wild (16-24% vs. 8%). Timber rattlesnake was also less well known, with a third of NY residents thinking they did not live in NYS. Again, hunters and anglers were more likely to consider themselves knowledgeable and have seen them in the wild than the general population. Piping plover and Karner blue butterfly live in small areas within NYS, and over 75% of New Yorkers have never heard of them. Upstate residents were more likely to think Karner blue butterflies live in New York (they live only upstate) and downstate residents were more likely to have seen piping plovers (they live primarily on Long Island). Northern long-eared bats were the species with which NY residents were least familiar, with over 80% never having heard of them. Hunters and anglers were much more likely to have heard of them, with over 60% indicating some level of knowledge. Very few New Yorkers (2%), hunters (4%), or anglers (8%) thought they had ever seen this species of bat in the wild.

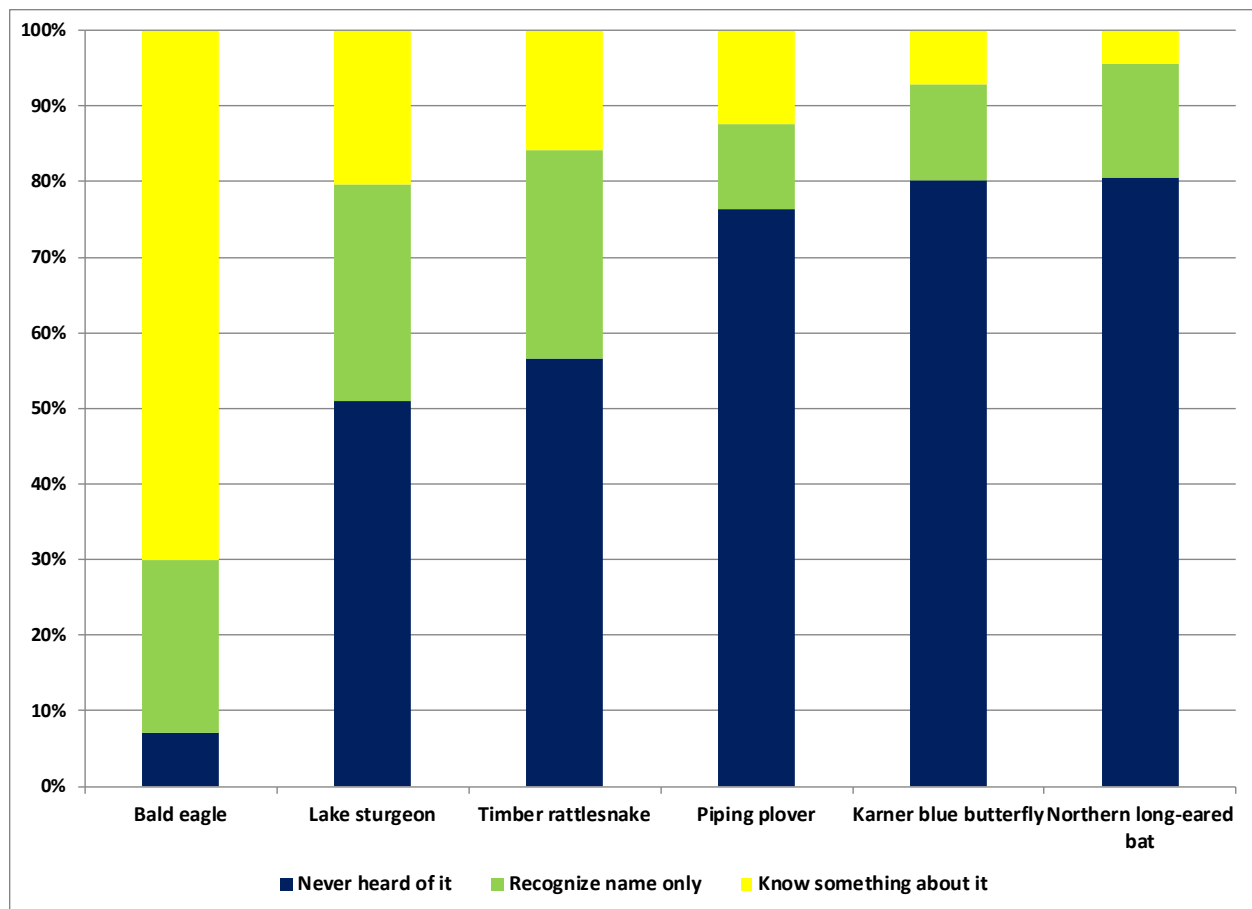


Figure 1. Awareness of specific T/E species by NY residents.

Table 7. Knowledge and interaction with specific T/E species by NY residents, hunters, and anglers.

T/E Species	Percent				
	NY Residents			Hunters	Anglers
	Overall	Upstate	Downstate		
Bald Eagle					
<i>Knowledge level</i> ^{a, b, d}					
Never heard of it	7.0	3.0	10.0	0.0	0.3
Recognize name	22.9	19.7	25.3	1.8	2.2
Know something about it	70.1	77.3	64.7	98.2	97.5
<i>If recognize name or know something, think it lives in NYS:</i> ^d					
No	16.4	10.1	21.5	na	na
Yes	78.8	87.3	71.8	na	na
Don't know	4.8	2.6	6.7	na	na
<i>Seen it in wild in NYS:</i> ^{a, b, d}					
No	60.9	43.5	74.3	12.5	11.7
Yes	39.1	56.5	25.7	87.5	88.3
Lake Sturgeon					
<i>Knowledge level</i> ^{a, b, c, d}					
Never heard of it	51.0	33.9	64.0	8.0	5.1
Recognize name	28.7	36.6	22.7	26.1	19.7
Know something about it	20.3	29.5	13.3	65.9	75.2
<i>If recognize name or know something, think it lives in NYS:</i> ^d					
No	14.4	10.8	19.4	na	na
Yes	76.7	83.9	66.7	na	na
Don't know	8.9	5.3	13.9	na	na
<i>Seen it in wild in NYS:</i> ^{a, b, c, d}					
No	91.8	87.2	95.3	84.3	76.3
Yes	8.2	12.8	4.7	15.7	23.7

Table 7 (cont.)

Table 7 (cont.)

	Percent				
	NY Residents				
T/E Species Awareness	Overall	Upstate	Downstate	Hunters	Anglers
Timber Rattlesnake					
<i>Knowledge level^{a, b, d}</i>					
Never heard of it	56.5	43.6	66.4	5.1	5.1
Recognize name	27.7	32.2	24.3	24.7	26.0
Know something about it	15.8	24.2	9.3	70.2	68.9
<i>If recognize name or know something, think it lives in NYS: ^d</i>					
No	38.7	27.8	52.5	na	na
Yes	52.6	63.6	38.6	na	na
Don't know	8.7	8.6	8.9	na	na
<i>Seen it in wild in NYS: ^{a, b, d}</i>					
No	95.3	92.1	97.7	86.8	84.5
Yes	4.7	7.9	2.3	13.2	15.5
Piper Plover					
<i>Knowledge level^{a, b, d}</i>					
Never heard of it	76.4	81.4	72.6	58.8	57.8
Recognize name	11.2	11.8	10.7	18.0	19.0
Know something about it	12.4	6.8	16.7	23.2	23.2
<i>If recognize name or know something, think it lives in NYS:</i>					
No	16.4	19.6	14.6	na	na
Yes	70.5	63.1	74.4	na	na
Don't know	13.1	17.3	11.0	na	na
<i>Seen it in wild in NYS: ^d</i>					
No	90.6	96.9	85.9	89.6	89.8
Yes	9.4	3.1	14.1	10.4	10.2

Table 7. (cont.)

T/E Species Awareness	Percent				
	NY Residents			Hunters	Anglers
	Overall	Upstate	Downstate		
Karner Blue Butterfly					
<i>Knowledge level</i>					
Never heard of it	80.1	79.9	80.3	na	na
Recognize name	12.7	10.8	14.0	na	na
Know something about it	7.2	9.3	5.7	na	na
<i>If recognize name or know something, think it lives in NYS: ^d</i>					
No	21.9	17.4	25.4	na	na
Yes	64.9	76.5	56.0	na	na
Don't know	13.2	6.1	18.6	na	na
<i>Seen it in wild in NYS:</i>					
No	95.3	94.1	96.3	na	na
Yes	4.7	5.9	3.7	na	na

Table 7. (cont.)

Table 77 (cont.)

	Percent				
	NY Residents				
T/E Species Awareness	Overall	Upstate	Downstate	Hunters	Anglers
Northern Long-Eared Bat					
<i>Knowledge level</i> ^{a, b, c}					
Never heard of it	80.6	77.1	83.3	35.8	36.2
Recognize name	14.9	18.3	12.4	43.2	33.7
Know something about it	4.5	4.6	4.3	21.0	30.1
<i>If recognize name or know something, think it lives in NYS:</i> ^d					
No	23.5	17.5	30.0	na	na
Yes	57.3	70.0	44.0	na	na
Don't know	19.2	12.5	26.0	na	na
<i>Seen it in wild in NYS:</i> ^{a, b, d}					
No	98.3	96.8	99.3	95.7	91.8
Yes	1.7	3.2	0.7	4.3	8.2

^aStatistically significant difference between NY residents overall and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between NY residents overall and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

^dStatistically significant difference between upstate and downstate residents at P=0.05 using chi-square test.

na- Question not asked of hunters and anglers.

Support for Protecting T/E Species

Using data from the follow-up survey, we found that environmental public policy issues were considered very important by a majority of hunters, anglers, and upstate residents, although a larger percentage of upstate residents were very concerned about these issues compared with hunters (Table 8). Economic-related public policy issues were considered very important by fewer upstate residents, but a majority of upstate residents were very concerned about most of these issues. More hunters and anglers were concerned about most of these economic-related issues than upstate residents.

Table 8. Public policy issues of concern to upstate residents*, hunters, and anglers.

Issues of Concern to New Yorkers	% who consider it a very important issue		
	Upstate residents	Hunters	Anglers
Environmental			
Protecting the environment	76.3	75.4	78.4
Dealing with problems of poverty ^a	65.0	55.5	59.0
Dealing with global warming ^a	58.3	48.3	50.7
Economic			
Defending U.S. against terrorism ^{a, b}	71.3	89.1	87.0
Reducing health care costs ^{a, b}	66.3	76.2	74.0
Improving the job situation	58.6	66.3	61.9
Strengthening nation's economy ^a	58.2	70.1	65.5
Reducing crime ^{a, b}	58.8	72.8	69.1
Reducing budget deficit ^{a, b}	45.5	65.7	57.9
Reducing middle class taxes ^{a, b, c}	46.8	67.8	58.6
Strengthening the military ^{a, b}	30.0	57.0	53.1

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

For those aware of T/E species, protecting them in NYS was important to some degree to almost all NY residents, hunters and anglers based on data from the screening survey (Table 9). It was very important to more NY residents and anglers than hunters. The level of importance did not differ between upstate and downstate residents, with two-thirds or more thinking it was very important for the government to protect T/E species in NYS.

Table 9. Importance of government protecting T/E species in NYS for NY residents*, hunters and anglers.

Importance of Government Protecting T/E Species in NYS ^{a, b, c}	Percent				
	NY Residents			Hunters	Anglers
	Overall	Upstate	Downstate		
Not at all important	2.3	2.4	2.2	0.8	0.7
Somewhat important	10.8	11.4	10.3	11.0	4.5
Moderately important	16.1	18.3	14.4	28.1	25.8
Very important	70.8	67.9	73.1	60.1	69.0

*For those aware of T/E species.

^aStatistically significant difference between NY residents overall and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between NY residents overall and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

We inquired about reasons why people might think it was important to protect T/E species in the follow-up survey (Table 10). The most important reasons had to do with the role T/E species played in nature. Three-quarters of upstate residents thought it was very important to protect T/E species because some of them are needed for the pollination of plants, they are important for maintaining biodiversity, and they play an important role in nature. Over 70% thought it was the right thing to do, that we have a responsibility to protect them, and that they are necessary for the health of the environment. These reasons were very important to hunters and anglers as well, but fewer hunters thought some of them were very important reasons. The opportunity to see T/E species in the wild was more likely to be very important to anglers than to upstate residents.

Table 10. Percent of upstate residents*, hunters, and anglers indicating each reason to protect T/E species was very important.

Reasons to protect T/E species in NYS	% who indicated it was a very important reason		
	Upstate residents	Hunters	Anglers
Role in Nature			
Some are needed for the pollination of plants ^{a, b}	82.0	67.5	74.0
They are important for maintaining biodiversity ^{a, c}	76.7	61.4	71.4
They play an important role in nature	75.3	68.1	75.0
It is the right thing to do	73.1	66.4	71.4
We have a responsibility to protect them	70.9	67.6	71.3
They are necessary for the health of the environment ^{a, c}	70.8	58.4	71.1
They could have benefits for human health ^a	52.5	42.6	46.0
Existence and Observation			
To know these species exist in the wild ^{b, c}	49.0	49.6	58.1
So future generations of New Yorkers can have the chance to see them in the wild ^b	52.3	58.8	63.1
So people can have a chance to see these species in the wild ^b	44.9	50.7	57.6

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

Awareness of Government Actions to Protect T/E Species

Almost 20% of NY resident respondents were not aware that the government takes actions to protect T/E species in New York State (Table 11). Downstate residents were somewhat more likely to be unaware. Even more NY residents (32%) were unaware that NYSDEC has a program to protect T/E species; more so downstate compared to upstate. Approximately one-quarter of NY residents felt they were very aware of the NYSDEC program. In comparison, almost half of the hunters and anglers felt they were very aware of the NYSDEC program. Less than 10% of hunters and anglers were unaware of the program.

Table 11. Awareness of government actions to protecting T/E species in NYS for NY residents*, hunters, and anglers.

	Percent				
	NY Residents			Hunters	Anglers
Awareness of government actions to protect T/E species in NYS ^d	Overall	Upstate	Downstate		
Not at all aware	18.6	13.2	22.8	na	na
Somewhat aware	48.8	51.5	46.7	na	na
Very aware	32.6	35.3	30.5	na	na
Awareness of NYSDEC program to protect T/E species ^{a, b, d}					
Not at all aware	31.9	23.3	38.8	8.3	6.9
Somewhat aware	41.3	47.5	36.3	41.5	46.9
Very aware	26.8	29.2	24.9	50.2	46.2

* Only those residents aware of T/E species were asked these questions.

^aStatistically significant difference between NY residents overall and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between NY residents overall and anglers at P=0.05 using chi-square test.

^dStatistically significant difference between upstate and downstate residents at P=0.05 using chi-square test.

na- Question not asked of hunters and anglers.

Support for the NYSDEC Endangered Species Program

On the follow-up survey, we evaluated support for two components of the program (listing/delisting decisions and the selection of management actions to protect or restore T/E species), and then asked about respondents' overall satisfaction with the program. Of those who were aware of the program, we found that one-fifth to one-third of upstate residents did not have an opinion about the program or its components (Table 12). Around 10% of hunters and anglers did not have an opinion. Among those with an opinion, most were positive or neutral; few were dissatisfied or negative. Regarding listing and delisting decisions, over 50% of upstate residents and over 60% of hunters and anglers thought NYSDEC makes good decisions. Similarly, over 40% of upstate residents and about 50% of hunters and anglers thought NYSDEC makes good decisions when selecting actions to protect T/E species. Fewer (27-34%) hunters, anglers, and upstate residents thought NYSDEC involved the public adequately in making these decisions. About one-fifth of upstate residents, and even more hunters and anglers (26-28%), thought NYSDEC did not involve the public adequately when deciding which species to protect and what actions to take to protect them. More respondents than not believed NYSDEC devoted enough resources toward protecting T/E species, but about half were neutral or indicated they didn't know. Among those who were aware of NYSDEC's program to protect T/E species, 41% of upstate residents, 50% of hunters, and 45% of anglers were satisfied overall with NYSDEC's efforts to protect T/E species in NYS. Approximately one-third of all groups were neutral, and almost one-quarter of upstate residents did not have an opinion. Very few upstate residents were dissatisfied and only about 10% of hunters and anglers were dissatisfied.

Factors Influencing Satisfaction with the NYSDEC Endangered Species Program

Overall program satisfaction was highest when people thought NYSDEC devoted enough resources toward protecting T/E species (corr. = 0.64), made good decisions about which species to protect (0.58) and which actions to take (0.62), and involved the public adequately in making those decisions (0.54 – 0.56). Those who trusted NYSDEC to make good decisions were also most likely to be satisfied with the program (0.51 – 0.52). Satisfaction with the program was not strongly related to socio-demographic characteristics, participation in outdoor recreation activities, core environmental beliefs, importance of general environmental or economic issues, or specific reasons for protecting T/E species in New York.

Table 12. Support for NYSDEC program to protect T/E species for upstate residents*, hunters, and anglers aware of program.

Support for NYSDEC efforts to protect T/E species	Percent					Don't know
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
<i>NYSDEC makes good decisions about which species should be protected in NYS^{a, b}</i>						
Upstate residents	7.9	44.7	21.1	1.3	1.3	23.7
Hunters	9.5	51.5	20.7	6.2	2.1	10.0
Anglers	13.4	46.8	21.9	5.6	1.9	10.4
<i>NYSDEC involves the public adequately when deciding which species to protect in NYS^{a, b}</i>						
Upstate residents	3.9	23.1	31.0	14.4	4.8	22.8
Hunters	7.4	25.9	27.2	21.0	7.4	11.1
Anglers	7.8	26.4	28.3	20.8	4.8	11.9
<i>NYSDEC makes good decisions when selecting actions to protect T/E species^{a, b}</i>						
Upstate residents	9.7	32.8	29.7	2.2	1.3	24.3
Hunters	9.5	37.0	30.9	8.6	2.9	11.1
Anglers	10.4	41.7	27.1	7.8	3.3	9.7
<i>NYSDEC involves the public adequately when selecting actions to protect T/E species^{a, b}</i>						
Upstate residents	4.8	23.3	30.5	15.4	2.2	23.8
Hunters	5.3	25.9	32.1	21.0	6.2	9.5
Anglers	6.7	27.8	26.2	22.1	5.6	11.6
<i>NYSDEC devotes enough resources toward protecting T/E species^{a, b}</i>						
Upstate residents	4.8	22.4	23.7	13.6	2.6	32.9
Hunters	8.3	27.7	35.5	12.8	2.9	12.8
Anglers	5.6	30.5	28.4	16.4	3.4	15.7
<i>Overall, I'm satisfied with NYSDEC's efforts to protect T/E species in NYS^{a, b}</i>						
Upstate residents	5.7	35.2	32.6	4.0	0.9	21.6
Hunters	9.1	41.3	32.2	7.0	2.1	8.3
Anglers	7.0	37.8	33.7	9.6	1.9	10.0

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

Factors Influencing Support for Listing/Delisting Decisions

A variety of factors could potentially influence a person's support for listing or delisting a species under the NYSDEC program. We examined a number of these factors in the follow-up survey including the importance of protecting species based on their taxonomic group. We found that most people felt it was important to protect all taxonomic groups (Table 13). Approximately 80% of hunters, anglers, and upstate residents thought it was very important to protect T/E mammals, fish and birds. Slightly fewer thought it was very important to protect plants, insects, reptiles and amphibians, but still a majority of all groups thought it was very important to protect all T/E species regardless of taxonomic group.

Table 13. Percent of upstate residents*, hunters, and anglers indicating it was very important to protect various taxonomic groups of T/E species.

Importance of protecting various taxonomic groups	% indicating it was very important		
	Upstate residents	Hunters	Anglers
T/E mammals	80.4	78.5	78.6
T/E fish	77.0	76.8	81.4
T/E birds	78.5	79.1	77.9
T/E plants	70.6	66.1	71.2
T/E reptiles or amphibians	70.9	68.1	70.9
T/E insects	63.5	61.5	61.5

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

Of the other factors that could influence support for protecting specific species, the one considered to be very important by the most hunters, anglers, and upstate residents (74-77%) was whether a species is found mostly in NYS and nowhere else (Table 14). If a species is threatened or endangered in New York but common elsewhere, far fewer people, especially upstate residents, thought it was very important to protect them. If private property owners would be restricted on what they could do on their land in order to protect a species, only about one-third of hunters, anglers, and upstate residents thought it was still very important to protect the species.

The importance of protecting a species did not seem to matter if a person was likely or not to see it. Approximately equal numbers of respondents (one-third to two-fifths) in all three groups thought it was very important to protect a species regardless of whether people were unlikely to see it, if people would like to see it, and if it might draw tourists to the state.

Twenty percent of upstate residents thought it was very important to protect a species if it was a species people would like to hunt when it was restored (Table 14). As expected, twice as many hunters thought it was very important.

Table 14. Percent of upstate residents*, hunters, and anglers indicating it was very important to protect T/E species based on their characteristics or circumstances.

Characteristics or Circumstances	% indicating it was very important		
	Upstate residents	Hunters	Anglers
The species is found mostly in NYS and nowhere else	76.7	74.6	73.5
The species is threatened or endangered in NY, but common elsewhere ^{a, b}	26.6	37.0	38.2
Private property owners will be restricted in what they can do on their land in order to protect the species	32.1	28.3	30.1
It is a species people are unlikely to see ^a	41.2	32.7	36.4
It is a species people like to see	31.3	36.0	32.3
The species will draw tourists to the state to see it	32.4	32.7	33.2
It is a species people would like to hunt when it is restored ^{a, b}	20.3	42.3	34.8
There is little or no hope that the population will ever recover or become stable	49.0	46.0	50.2
It costs a lot to protect the species	27.2	31.3	32.4

* Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

About half of hunters, anglers, and upstate residents thought it was very important to protect a species even if there is little or no hope that the population will ever recover or become stable (Table 14). Far fewer thought it was very important to protect a species if it cost a lot. In a related set of questions, respondents expressed similar opinions about whether T/E species should be protected no matter what the cost (Table 15). About 43% of anglers and upstate residents and 34% of hunters thought they should be protected no matter the costs, and about 30% thought they should not. They were more in agreement that species should not be allowed to go extinct, with three-quarters of hunters, anglers, and upstate residents indicating that it is not OK to let some species become extinct. A few were willing to let species become extinct in NYS if they existed elsewhere. About 30% thought that some species that used to live in NYS can no longer survive here, and a number of respondents (17-27%) were unsure.

Table 15. Degree to which upstate residents*, hunters, and anglers agree or disagree with statements regarding decisions about which species should be protected.

	Percent					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
<i>T/E species should be protected no matter what the cost</i>						
Upstate residents	15.8	27.9	27.0	20.5	7.3	1.5
Hunters	12.4	21.8	28.6	24.4	9.5	3.3
Anglers	13.8	29.2	29.1	18.6	8.0	1.3
<i>It is OK to let species become extinct in NY, if they exist elsewhere</i>						
Upstate residents	2.3	10.9	21.7	38.3	25.2	1.6
Hunters	2.5	9.8	22.9	40.9	21.7	2.2
Anglers	1.9	7.0	17.3	43.1	29.4	1.3
<i>It is OK to let some species become extinct</i>						
Upstate residents	1.9	5.8	14.4	30.7	40.6	6.6
Hunters	2.2	8.8	13.6	34.4	37.3	3.7
Anglers	1.3	6.1	11.9	35.3	43.2	2.2
<i>Some species that used to live in NYS can no longer survive here^a</i>						
Upstate residents	6.7	22.5	27.3	11.1	5.5	26.9
Hunters	4.4	25.5	26.3	18.6	8.0	17.2
Anglers	4.5	24.4	28.6	14.9	6.2	21.4
<i>NYSDEC understands which factors to consider when deciding what species should be protected^{a, b}</i>						
Upstate residents	6.9	35.6	27.8	7.3	0.4	22.0
Hunters	6.2	37.6	27.2	10.5	4.7	13.8
Anglers	5.8	41.2	28.1	10.5	4.5	9.9
<i>I trust NYSDEC to make decisions about which species to protect^{a, b}</i>						
Upstate residents	9.3	41.2	27.4	8.9	0.8	12.4
Hunters	9.1	42.0	25.3	11.6	5.1	6.9
Anglers	7.0	40.5	28.3	14.3	3.5	6.4

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

About half of the hunters, anglers, and upstate residents indicated that they trusted NYSDEC to make decisions about which species to protect (Table 15). The remaining respondents were mostly neutral or unsure. A slightly higher percentage of hunters (16%) and anglers (18%) did not trust NYSDEC compared with upstate residents (10%). About 45% of hunters, anglers, and upstate residents thought NYSDEC understands which factors to consider when deciding what species should be protected, with the remainder mostly neutral or unsure, and a few (15% of hunters and anglers, 8% of upstate residents) thinking NYSDEC does not understand what factors to consider.

The factors most highly correlated with the belief that NYSDEC was making good decisions about which species should be protected included thinking NYSDEC involves the public adequately in deciding which species to protect (corr. = 0.57), trusting NYSDEC to make good decisions (0.52), and believing NYSDEC understands which factors to consider when making decisions (0.50). Thus, respondents who believed NYSDEC involved the public adequately, trusted them to make good decisions, and believed they understood the important factors to consider when making decisions believed NYSDEC was making good decisions about which species should be protected. Other factors such as the importance of protecting various taxonomic groups, protecting species found mostly in New York, protecting species people would like to see, general environmental issues, and core ecological beliefs were significantly correlated with the belief that NYSDEC was making good decisions about which species to protect, but the correlations were not strong (corr. range 0.10 - 0.30) and the interpretation of the relationships not clear cut. Socio-demographic characteristics and participation in outdoor recreation activities were not correlated with the belief that NYSDEC was making good decisions about which species should be protected.

Factors Influencing Support for Implementing Management Actions

NYSDEC could consider the opinions of a variety of different organizations and individuals when deciding what actions they might take to protect or restore T/E species. In the follow-up survey, we learned that three-quarters of upstate residents and anglers, and slightly fewer hunters, thought it was very important that NYSDEC consider the opinions of *scientists* who work with T/E species (Table 16). Half of upstate residents, but fewer hunters and anglers (about 40%) thought it was very important that NYSDEC consider the opinions of *environmental groups* like Audubon or The Nature Conservancy. Over half of the hunters and anglers also thought it was very important to consider the opinions of *private landowners* who may be impacted; fewer upstate residents (43%) thought it was very important to consider the opinions of this group. Fewer respondents, generally less than one-third, thought it was very important to consider the opinions of other groups such as *local government officials* or *members of the business community*.

Table 16. Percent of upstate residents*, hunters, and anglers indicating it was very important to consider the opinions of various groups of people when deciding management actions to take to protect T/E species.

Whose opinion should be considered when deciding what actions to take	% indicating it was very important		
	Upstate residents	Hunters	Anglers
Scientists who work with T/E species ^a	75.5	67.4	73.3
Environmental groups like Audubon or The Nature Conservancy ^{a, b}	52.9	37.9	41.0
Private landowners who may be impacted ^{a, b}	43.3	62.9	54.8
The general public ^b	29.8	36.6	39.0
Local government officials	23.6	27.3	29.1
Members of the business community	16.1	18.3	17.5

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

About two-thirds of upstate residents, but only half of hunters and anglers, thought protection of T/E species should supersede landowner rights to use or develop their property (Table 17). About 40% of all three groups thought that landowners prevented from developing their property should be compensated by the public. Over 80% of hunters, anglers, and upstate residents thought NYSDEC should work on improving habitat for T/E species on *public* lands. Fewer, but still over 50% of all groups, thought NYSDEC should work on improving habitat on *private* lands.

Over half of the hunters, anglers, and upstate residents indicated that they trusted NYSDEC to take actions that would protect T/E species (Table 17). The remaining respondents were mostly neutral or unsure, rather than distrustful. Similarly, over half of the hunters, anglers, and upstate residents thought NYSDEC understands how to protect T/E species, with the remainder mostly neutral or unsure. As previously reported, more respondents felt NYSDEC devoted enough resources toward protecting T/E species than not, but about half were neutral or indicated they didn't know.

As far as specific actions respondents would support to protect T/E species, 76% of upstate residents, 71% of anglers and 61% of hunters strongly support educational activities at sites where T/E species live (Table 18). A majority also strongly support fining those who harm T/E species or their habitats. Over half of upstate residents and anglers would strongly support reintroducing T/E species to areas where they lived before, and 40% of these two groups would strongly support having the State buy land to protect habitat for T/E species. Fewer hunters (47%) were strongly supportive of reintroducing T/E species to areas where they lived before, and even fewer (26%) were strongly supportive of the State buying land. Actions that restrict access or development of land to varying degrees were less strongly supported even though they might harm T/E species. Blocking public access for part of the year or restricting development of areas that are habitat for T/E species was strongly supported by about half of upstate residents, but fewer hunters and anglers (28-45%). Some hunters (23%), anglers (17%), and upstate residents (13%) would not support at all closing some public land to all public access. Similarly, small percentages of hunters (23%), anglers (23%), and upstate residents (14%) would not support restricting landowners from doing things on their properties that might harm T/E species.

Table 17. Support for NYSDEC management actions or conditions under which those actions could be taken to protect T/E species, by upstate residents*, hunters, and anglers.

	Percent					
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
<i>T/E species protection should not interfere with a landowner's right to develop property</i> ^{a, b}						
Upstate residents	5.8	13.1	20.1	37.8	20.5	2.7
Hunters	10.9	16.3	30.4	27.5	11.6	3.3
Anglers	11.9	18.6	20.3	30.2	15.1	3.9
<i>Landowners should not have the right to use their property in ways that endanger a species</i> ^a						
Upstate residents	26.2	39.6	14.6	11.5	6.5	1.5
Hunters	16.3	29.3	27.2	15.9	8.0	3.3
Anglers	19.6	34.0	22.1	14.4	7.4	2.6
<i>Landowners prevented from developing their property because of T/E species laws should be paid for any lost income by the public</i>						
Upstate residents	11.6	27.1	29.5	20.9	7.4	3.5
Hunters	13.5	30.9	24.0	17.5	9.5	4.7
Anglers	17.6	26.5	24.6	17.6	8.6	5.1
<i>NYSDEC should work on improving habitat for T/E species on <u>public</u> land</i>						
Upstate residents	40.5	45.1	8.6	1.6	1.6	2.7
Hunters	33.9	52.6	8.4	1.5	1.1	2.6
Anglers	35.7	48.4	11.5	1.3	0.6	2.5
<i>NYSDEC should work on improving habitat for T/E species on <u>private</u> land</i> ^b						
Upstate residents	19.1	35.2	27.0	6.3	6.3	6.3
Hunters	14.2	37.5	26.5	12.0	5.5	4.4
Anglers	18.5	35.7	23.6	15.3	3.8	3.2
<i>NYSDEC understands how to protect T/E species</i> ^{a, b}						
Upstate residents	10.1	43.2	23.7	5.8	0.4	16.7
Hunters	9.1	46.7	25.7	6.9	2.5	9.1
Anglers	8.3	46.5	26.8	8.0	2.2	8.3
<i>I trust NYSDEC to take actions that will protect T/E species</i>						
Upstate residents	10.5	46.9	23.8	5.9	2.0	10.9
Hunters	10.5	46.0	26.1	5.8	4.7	6.9
Anglers	12.4	47.8	21.0	9.9	3.5	5.4

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

Table 18. Percent of upstate residents*, hunters, and anglers indicating strong support for various specific actions that could be taken to protect T/E species.

Possible actions to protect T/E species	% who indicated strong support for action		
	Upstate residents	Hunters	Anglers
Talking to public about how to protect T/E species at sites where these species live ^{a, c}	76.3	60.8	70.7
Fining those who harm T/E wildlife or their habitats	63.1	63.1	60.6
Reintroducing T/E species to areas where they lived before ^a	57.1	47.1	55.4
Having the State buy land to protect habitat for T/E species ^{a, c}	40.4	26.0	40.4
Blocking public access to an area for part of the year to protect a species ^{a, b}	55.3	36.8	44.7
Restricting development of areas that are habitat for some T/E wildlife ^{a, c}	43.4	28.1	38.7
Closing some public land to all public access to protect a species ^{a, c}	36.6	20.2	30.5
Restricting landowners from doing things on their properties that might harm T/E species ^{a, c}	29.4	14.7	24.3

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

^aStatistically significant difference between upstate residents and hunters at P=0.05 using chi-square test.

^bStatistically significant difference between upstate residents and anglers at P=0.05 using chi-square test.

^cStatistically significant difference between hunters and anglers at P=0.05 using chi-square test.

To gauge support for specific actions that would impact respondents on a personal level, we asked property owners with an acre or more of land (79% of respondents) about their willingness to protect T/E species on their property. We found no differences in willingness based on property size, so report in Tables 19 and 20 the results for respondents only by audience type. (Note: We also found no significant differences in willingness to protect T/E species between hunters, anglers, and upstate residents.) Almost all respondents had some willingness to consider following a conservation plan to maintain habitat for T/E wildlife on their property (Table 19). A few more people might be very willing to consider it if there was a financial incentive, but the differences were very small. Over 80% of respondents also supported to some extent the reintroduction of T/E wildlife to its historical range if it was near their property (Table 20).

Table 19. For those owning 1 or more acres of land and aware of T/E species, percent of upstate residents*, hunters, and anglers willing to follow a conservation plan on their property to maintain habitat for T/E species.

	Percent			
	Not at all willing	Possibly willing	Willing	Very willing
<i>Willingness to follow a conservation plan to maintain habitat for T/E wildlife on your property</i>				
Upstate residents	6.1	48.6	27.0	18.3
Hunters	8.0	47.2	27.2	17.6
Anglers	7.5	47.0	26.8	18.7
<i>If you received money, willingness to follow a conservation plan to maintain habitat for T/E wildlife on your property</i>				
Upstate residents	1.8	46.9	26.5	24.8
Hunters	7.2	40.8	27.2	24.8
Anglers	6.0	42.1	29.3	22.6

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

Table 20. For those owning 1 or more acres of land and aware of T/E species, percent of upstate residents*, hunters, and anglers who support reintroduction of T/E species near their property.

	Percent				
	Strongly oppose	Possibly oppose	Neither support or oppose	Possibly support	Strongly support
<i>Support for reintroducing T/E wildlife to its historical range if it was near your property</i>					
Upstate residents	0.9	5.2	7.8	52.5	33.6
Hunters	4.0	4.8	8.9	57.3	25.0
Anglers	1.5	4.5	12.0	48.9	33.1

*Questions were asked on the follow-up survey, which did not have a sufficient sample size for downstate resident analysis.

The factors most highly correlated with the belief that NYSDEC was making good decisions when selecting actions to protect T/E species included thinking NYSDEC involves the public adequately when selecting actions (corr. = 0.62), trusting NYSDEC to make good decisions (0.56), and believing NYSDEC understands how to protect T/E species (0.54). Thus,

respondents who believed NYSDEC involved the public adequately, trusted them to make good decisions, and believed they understood how to protect T/E species believed NYSDEC was making good decisions when it came to selecting actions to protect T/E species. People who believed NYSDEC devoted enough resources toward protecting T/E species were also likely to believe they were making good decisions when it came to selecting actions to protect T/E species, but the correlation was not as strong as for the previously discussed factors (corr.= 0.38). Those who thought it was very important to involve scientists (corr. = 0.26) and environmental groups (0.33) when deciding on actions to take were also likely to believe NYSDEC was making good decisions when it came to selecting actions to protect T/E species, but the correlations were not as strong as above. Other factors with significant correlations with the belief that NYSDEC was making good decisions when selecting actions to protect T/E species were core ecological beliefs (0.24) and the importance of general environmental issues (0.26). Socio-demographic characteristics and participation in outdoor recreation activities were not correlated with the belief that NYSDEC was making good decisions when selecting actions to protect T/E species.

CONCLUSIONS AND RECOMMENDATIONS

Almost all New York State residents have some level of awareness of threatened and endangered species. The bald eagle is the T/E species most New Yorkers say they know something about. The depth of their knowledge, though, may be limited. Far fewer NY residents had ever heard of the five other endangered species we asked about, and 42% reported they knew very little about T/E species in general. Because knowledge levels appear low, education and outreach programs to further inform New Yorkers about T/E species have the potential to greatly increase the number of New Yorkers who are knowledgeable about them, if those programs are able to engage residents.

Only 27% of NY residents were very aware of NYSDEC's efforts to protect T/E species, suggesting that if NYSDEC wants to build recognition of its efforts to protect T/E species, there is the opportunity to inform large numbers of people. Hunters and anglers were far more likely to be aware of NYSDEC's efforts.

Despite this lack of specific knowledge, most respondents think it is important to protect the environment and T/E species. Their primary reasons for wanting to protect T/E species have to do with the role they play in nature and their belief that we have a responsibility to protect them. These types of reasons for protecting T/E species were important to more people than their desire to actually see the species in the wild.

Almost half of hunters and anglers and 41% of upstate residents who were aware of the program were satisfied with NYSDEC's efforts to protect T/E species in NYS, with the remainder being mostly neutral or having no opinion. Ten percent or fewer were dissatisfied. Overall satisfaction with NYSDEC's efforts to protect T/E species was highest among those who: a) thought NYSDEC devoted enough resources toward protecting T/E species, b) made good decisions about which species to protect and which actions to take to protect T/E species, c) involved the public adequately in making those decisions, and d) trusted NYSDEC to make good decisions.

We do not know if these relationships are causal, but, if they are, engaging the public in and informing them about NYSDEC's T/E program could help to build program satisfaction.

Three-quarters of hunters, anglers, and upstate residents thought it was very important to protect species found mostly in NYS and nowhere else. They also did not want to see any species go extinct. Respondents made little distinction between taxonomic groups, considering all very important to protect. Respondents had diverse opinions about whether T/E species should be protected no matter what the cost, with about 40% indicating they thought they should be protected no matter the cost and one-third indicating they thought they should not. Also if private property owners would be restricted on what they could do on their land in order to protect a species, only about one-third of hunters, anglers, and upstate residents thought it was still very important to protect the species. These findings suggest there are limits to what some people are willing to support to protect T/E species.

Actions to protect T/E species that were supported by over 50% of hunters, anglers, and upstate residents included: 1) improving habitat for T/E species on *public* lands, 2) improving habitat on *private* lands, and 3) fining those who harm T/E species or their habitats. Fewer hunters, and to a lesser extent upstate residents and anglers, were willing to support actions that partially restrict access or development of land, such as blocking public access to an area for part of the year. The most restrictive actions (e.g., closing an area to all public access, restricting landowners' use of their property) were not supported at all by up to one-quarter of respondents.

When asked about actions that might have a direct personal impact on the use of their own land, people who owned an acre or more had some willingness to consider following a conservation plan to maintain habitat for T/E wildlife on their property. Offering a financial incentive increased the proportion who would be "very willing" by only 7% or less, suggesting financial incentives might not have much of an influence on participation. (No differences based on property size were detected.) Most respondents also supported the reintroduction of T/E wildlife to its historical range if that was near their property. These findings suggest a willingness of landowners to consider protecting habitat for T/E species on their land, at least in the abstract. Additional research could be undertaken with those who have been directly impacted to gauge their impressions of NYSDEC actions and support for protecting T/E species.

Interviewees generally reflected the statewide population from which they were drawn in terms of race and gender, but they did tend to be older than the statewide population. These findings suggest potential limitations of our data in representing all NY residents. Comparisons, though, between those who responded to the follow-up survey versus those who did not found that while respondents to the follow-up survey were more aware of T/E species and programs to protect them, they were not more likely to think it was very important to protect them. Another limitation of our data is the small number of downstate respondents to the follow-up survey. While this was not wholly unexpected given the initial sample size, we had hoped that it would have been sufficiently large that we could have made statements about all NY residents, as we can with the screening survey data. Instead we were limited to reporting results from the follow-up survey for upstate residents only.

In summary, NY residents were less aware and knowledgeable about T/E species and NYSDEC's efforts to protect them compared with hunters and anglers. Upstate residents, however, felt it was important to protect these species and were supportive of a variety of actions, especially educational programs and protecting habitat on both public and private land. The majority of hunters and anglers were very aware of T/E species, thought they were important to protect, and satisfied with NYSDEC's efforts. In some cases, hunters in particular though were not as strongly supportive of management actions to protect T/E species as upstate residents and anglers were.

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APPENDIX A: TELEPHONE SCREENING SURVEY QUESTIONS FOR NY RESIDENTS

1. First, in what year were you born? 19_____ *(If interviewee is reluctant to answer the question, explain that we need to be sure everyone we interview is 18 or older.)*

If interviewee was born before 1999, continue. If interviewee was born in 1999 or later, ask to speak with someone in the household who is 18 or older, repeat intro and first question before continuing.

2. What county in New York do you currently live in?

_____ Answer will be linked to strata

_____ Don't live in NYS (END INTERVIEW - That's the only question I have today. Thank you very much for taking the time to talk with me.)

3. Have you participated in any of the following activities in the past year:

a. Hiking

____ No
____ Yes

b. Camping

____ No
____ Yes

c. Boating, either in a motorized or non-motorized boat

____ No
____ Yes

d. Watching birds or wildlife

____ No
____ Yes

e. Fishing

____ No
____ Yes

f. Hunting

____ No
____ Yes

Now I'm going to ask you about some animals. I'd like to know if you recognize the name, know something about it, or never heard of it before.

4. The first one is the bald eagle, do you:

- ☐ Recognize the name, but that's it
- ☐ Know something about it
- ☐ Never heard of it

4a. If checked Recognize or Know: Do you think they live in New York State?

- ☐ No
- ☐ Yes -> **4b** Have you ever seen one in the wild in New York?
- ☐ Don't know
- ☐ No
- ☐ Yes

5. How about piping plover? (*Interviewers: FYI – This is a bird.*)

- ☐ Recognize the name, but that's it
- ☐ Know something about it
- ☐ Never heard of it

If checked Recognize or Know: Do you think they live in New York State?

- ☐ No
- ☐ Yes -> Have you ever seen one in the wild in New York?
- ☐ Don't know
- ☐ No
- ☐ Yes

6. Northern long-eared bat? (*Interviewers: Please emphasize that we're asking about a Northern long-eared bat, not just any old bat.*)

- ☐ Recognize the name, but that's it
- ☐ Know something about it
- ☐ Never heard of it

If checked Recognize or Know: Do you think they live in New York State?

- ☐ No
- ☐ Yes -> Have you ever seen one in the wild in New York?
- ☐ Don't know
- ☐ No
- ☐ Yes

7. Lake Sturgeon? (*Interviewers: FYI – This is a fish.*)

- ☐ Recognize the name, but that's it
- ☐ Know something about it
- ☐ Never heard of it

If checked Recognize or Know: Do you think they live in New York State?

- ☐ No
- ☐ Yes -> Have you ever seen one in New York waters?
- ☐ Don't know
- ☐ No
- ☐ Yes

8. Timber rattlesnake? (Interviewers: Please emphasize that we're asking about a Timber rattlesnake, not just any old snake.)

_____ Recognize the name, but that's it

_____ Know something about it

_____ Never heard of it

If checked Recognize or Know: Do you think they live in New York State?

_____ No

_____ Yes -> Have you ever seen one in the wild in New York?

_____ Don't know

_____ No

_____ Yes

9. And lastly Karner Blue Butterfly? (Interviewers: Please emphasize that we're asking about a Karner Blue butterfly, not just any old butterfly.)

_____ Recognize the name, but that's it

_____ Know something about it

_____ Never heard of it

If checked Recognize or Know: Do you think they live in New York State?

_____ No

_____ Yes -> Have you ever seen one in the wild in New York?

_____ Don't know

_____ No

_____ Yes

10. Have you ever heard the terms "threatened species" or "endangered species?"

_____ No (SKIP TO TEXT BEFORE QUESTION 14)

_____ Yes -> Would you say you know very little, something, or a lot about threatened and endangered species?

_____ Very little

_____ Something

_____ A lot

11. How important do you think it is for the government to protect threatened and endangered species in New York?

_____ Not at all important

_____ Somewhat important

_____ Moderately important

_____ Very important

12. Prior to my call today, were you aware that the government takes actions to protect threatened and endangered species in New York?

- ☐ Not at all aware
- ☐ Somewhat aware
- ☐ Very aware

13. Were you aware that the New York State Department of Environmental Conservation, NYSDEC, has a program to protect threatened and endangered species?

- ☐ Not at all aware
- ☐ Somewhat aware
- ☐ Very aware

In these final few questions, we would like to gather a little background information about you.

14. Is your primary residence in an urban area, suburban area, or rural area?

- ☐ Urban
- ☐ Suburban
- ☐ Rural

15. Do you own 5 or more acres of land in New York State?

- ☐ No
- ☐ Yes

16. Which of the following race or ethnicity categories apply to you? (Check all that apply.)

- ☐ White
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Asian
- ☐ American Indian
- ☐ Other (please specify)

If respondent said “No” that they were not aware of the terms “threatened species” or “endangered species,” end interview (Thank you very much for taking the time to talk with me).

Record Gender: ☐ Male ☐ Female

17. We'll be contacting you again in April to ask you more about threatened and endangered species. And about how important you think it is to protect those species compared to other things the government might do. We'd prefer to survey you by email because it doesn't cost as much and saves us all money. Would you please provide me with your email address? *(If reluctant, you can assure them again that we will keep their information confidential, and not give it to any other organization.)*

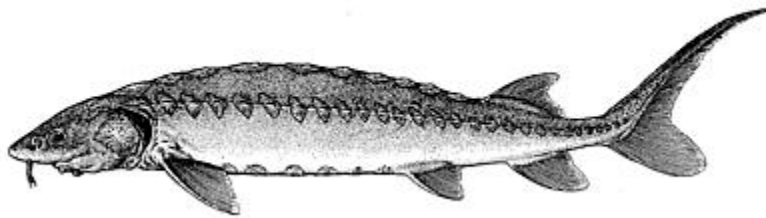
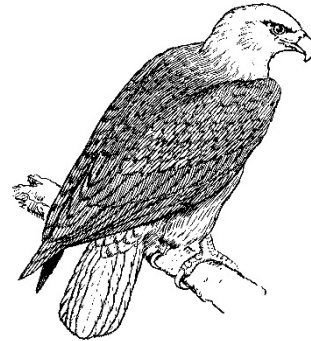
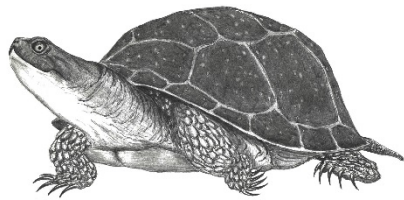
_____ Email address (Confirm email address _____)

If no email, may I confirm your mailing address so we can send you our survey? Is it?
_____ (Information from sample file)

_____ Refuse to participate in survey

That's all the questions I have for you. Thank you for taking the time to speak with me today. END INTERVIEW. Record Gender: _____ Male _____ Female

A Survey about Threatened and Endangered Species in New York State



Cornell University
Human Dimensions Research Unit

A Survey about Threatened and Endangered Species in New York State

Research conducted by the
Human Dimensions Research Unit
Department of Natural Resources
Cornell University

in cooperation with the
New York State Dept. of Environmental Conservation (NYSDEC)

Earlier this year, we contacted you and asked about your interests in wildlife and fish in New York State, your outdoor activities, and your awareness of threatened and endangered species living in the state. You provided your mailing address so we could contact you again to ask some more detailed questions about your views on threatened and endangered species.

We would like to know how important you think it is to protect threatened and endangered species, what concerns you might have about protecting them, and what you think the government in New York should do to protect them.

Even if you don't know much about threatened and endangered species your answers are still very important, so that our research reflects the views of all New York residents, rather than just those who are most interested. You can simply check "Don't Know" to some of the questions, if needed. The information you provide will help us understand how New Yorkers view threatened and endangered species, and what can be done to help manage them successfully.

Please complete this questionnaire as soon as you can, seal it with the white re-sealable label provided, and drop it in any mailbox; return postage has been paid. Your participation is voluntary, but we sincerely hope you will take just a few minutes to answer our questions. Your identity will be kept confidential and the information you give us will never be associated with your name.

THANK YOU FOR YOUR HELP!

1. How much would you say you know about New York State's threatened and endangered species?

- ☐ Very little
☐ Something
☐ A lot

2. How important to you personally are each of these potential reasons for protecting threatened and endangered species in New York State? (Check one box for each reason.)

	Not at all important	Slightly important	Moderately important	Very important
They play an important role in nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
So people can have the chance to see these species in the wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
So future generations of New Yorkers can have the chance to see them in the wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
They are important for maintaining biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To know these species exist in the wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
They are necessary for the health of the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
They could have benefits for human health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a responsibility to protect them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some are needed for the pollination of plants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is the right thing to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Besides protecting threatened or endangered species, New Yorkers may be concerned about a wide variety of issues and some are more important than others. How important are each of the following issues to you? (Check one box for each issue.)

	Not at all important	Slightly important	Moderately important	Very important
Defending U.S. against terrorism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with problems of poverty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improving the job situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing middle class taxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening the military	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protecting the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with global warming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening nation's economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing budget deficit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing health care costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing crime	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How important do you think it is for the government to protect threatened and endangered species in New York State?

- ☐ Not at all important
☐ Slightly important
☐ Moderately important
☐ Very important

5. Before being contacted by us, were you aware that the New York State Department of Environmental Conservation (NYSDEC) has a program to protect threatened and endangered species?

- ☐ Not at all aware (SKIP TO Question 7)
☐ Somewhat aware
☐ Very aware

6. How strongly do you agree or disagree with the following statements about NYSDEC's efforts to protect threatened and endangered species? (Check one box for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
NYSDEC makes good decisions about which species should be protected in New York State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC involves the public adequately when deciding which species to protect in New York State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC makes good decisions when selecting actions to protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC involves the public adequately when selecting actions to protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC devotes enough resources toward protecting threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, I'm satisfied with NYSDEC's efforts to protect threatened and endangered species in New York State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. When deciding what actions to take to protect or restore threatened and endangered species, how important is it for NYSDEC to consider the opinions of: (Check one box for each group.)

	Not at all important	Slightly important	Moderately important	Very important
Scientists who work with threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental groups like Audubon or The Nature Conservancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The general public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Members of the business community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private landowners who may be impacted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local government officials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How important is it to protect: (Check one box for each statement.)

	Not at all important	Slightly important	Moderately important	Very important
Threatened or endangered <i>mammals</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>birds</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>fish</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>reptiles or amphibians</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>insects</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>plants</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. How important is it to protect threatened and endangered species if: (Check one box for each statement.)

	Not at all important	Slightly important	Moderately important	Very important
The species is threatened or endangered in New York, but common elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is little or no hope that the population will ever recover or become stable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private property owners will be restricted in what they can do on their land in order to protect the species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a species people like to see	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a species people would like to hunt when it is restored	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The species will draw tourists to the state to see it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The species is found mostly in New York State and nowhere else	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It costs a lot to protect the species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a species people are unlikely to see	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. How strongly do you agree or disagree with the following statements about threatened and endangered species? (Check one box for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
Threatened and endangered species protection should not interfere with a landowner's right to develop property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landowners should not have the right to use their property in ways that endanger a species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landowners prevented from developing their property because of threatened and endangered species laws should be paid for any lost income by the public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened and endangered species should be protected no matter what the cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is OK to let species become extinct in New York, if they exist elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is OK to let some species become extinct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some species that used to live in New York State can no longer survive here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC understands which factors to consider when deciding what species should be protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I trust NYSDEC to make decisions about which species to protect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC understands how to protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I trust NYSDEC to take actions that will protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC should work on improving habitat for threatened and endangered species on <i>public</i> land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC should work on improving habitat for threatened and endangered species on <i>private</i> land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How strongly would you support each of the following actions to protect threatened and endangered species in New York? *(Check one box for each statement.)*

	Would <u>not</u> support	Slightly support	Moderately support	Strongly support
Having the State buy land to protect habitat for threatened or endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restricting development of areas that are habitat for some threatened and endangered wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fining those who harm threatened and endangered wildlife or their habitats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blocking public access to an area for part of the year to protect a species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closing some public land to all public access to protect a species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restricting landowners from doing things on their properties that might harm threatened or endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talking to the public about how to protect threatened and endangered species at sites where these species live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reintroducing threatened or endangered species to areas where they lived before	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. How many acres of land do you own in New York State?

- ☐ Do not own any land
- ☐ < 1 acre

_____ Number of acres

If you do not own land in New York State, please SKIP to Question 16.

13. Would you be willing to follow a conservation plan to maintain habitat for threatened and endangered wildlife on your property?

- ☐ Not at all willing
- ☐ Possibly willing
- ☐ Willing
- ☐ Very willing

14. If you received money, would you be willing to follow a conservation plan to maintain habitat for threatened and endangered wildlife on your property?

- ☐ Not at all willing
- ☐ Possibly willing
- ☐ Willing
- ☐ Very willing

15. Would you support or oppose reintroducing threatened or endangered wildlife to its historical range if it was near to your property?

- ☐ Strongly oppose
- ☐ Possibly oppose
- ☐ Neither support or oppose
- ☐ Possibly support
- ☐ Strongly support

BACKGROUND INFORMATION

16. Have you not been able to go into an area because it was closed to protect threatened or endangered species?

- ☐ No
☐ Yes
☐ Unsure

17. How strongly do you agree or disagree with the following statements? (Check one box for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Humans must live in harmony with nature in order to survive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plants and animals exist primarily to be used by humans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is very delicate and easily upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When humans interfere with nature, it often produces disastrous consequences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans have the right to modify the natural environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humankind was created to rule over the rest of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The best government is the one that governs the least	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most environmental problems can be solved by applying more and better technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. What is the highest level of education you have completed?

(Check one.)

- ☐ Less than high school
- ☐ High school diploma / G.E.D.
- ☐ Some college or technical school
- ☐ Associate's degree
- ☐ College undergraduate degree (e.g., B.A., B.S.)
- ☐ Graduate or professional degree (e.g., M.S., Ph.D., M.D., J.D.)

19. In general, do you think of yourself as...

- ☐ Very liberal
- ☐ Somewhat liberal
- ☐ Moderate/Middle of the road
- ☐ Somewhat conservative
- ☐ Very conservative

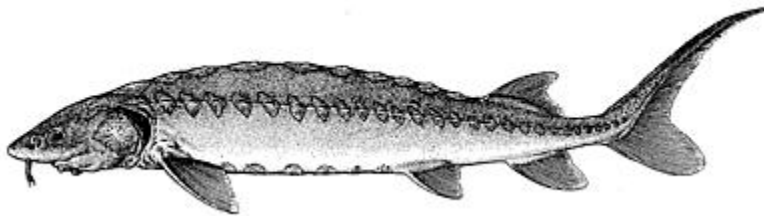
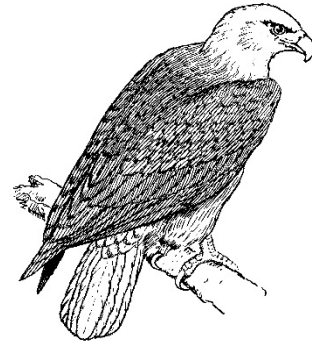
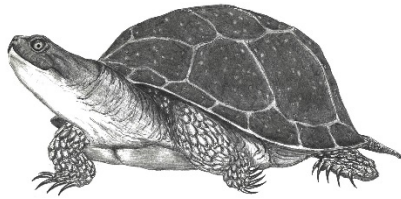
Please use the space below for any comments you wish to make.

Thank you for your time and effort!

To return this questionnaire, simply seal it with the white removable seal, and drop it in the mail (return postage has been paid).

APPENDIX C: MAIL QUESTIONNAIRE FOR HUNTERS AND ANGLERS

**A Survey about
Threatened and Endangered Species in New York
State**



Cornell University
Human Dimensions Research Unit

A Survey about Threatened and Endangered Species in New York State

Research conducted by the
Human Dimensions Research Unit
Department of Natural Resources
Cornell University

in cooperation with the
New York State Dept. of Environmental Conservation (NYSDEC)

The New York State Department of Environmental Conservation (NYSDEC) asked Cornell to survey hunters and anglers about how threatened and endangered species in New York State are managed. We would like to know how important you think it is to protect threatened and endangered species, what concerns you might have about protecting them, and how NYSDEC should protect them.

Even if you don't know much about threatened and endangered species your answers are still very important, so that our research reflects the views of all hunters and anglers, rather than just those who are most interested. You can simply check "Don't Know" to some of the questions, if needed. The information you provide will help us understand how New York hunters and anglers view threatened and endangered species, and what can be done to help manage them successfully.

Please complete this questionnaire as soon as you can, seal it with the white re-sealable label provided, and drop it in any mailbox; return postage has been paid. Your participation is voluntary, but we sincerely hope you will take just a few minutes to answer our questions. Your identity will be kept confidential and the information you give us will never be associated with your name.

THANK YOU FOR YOUR HELP!

1. How much do you know about each of the following animals, and have you ever seen them in New York? (Check all boxes that apply.)

	Never heard of it	Recognize name	Know something about it	I have seen it in the wild in New York State
Bald eagle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piping plover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Northern long-eared bat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake sturgeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timber rattlesnake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How much would you say you know about New York State's threatened and endangered species?

☐ Very little ☐ Something ☐ A lot

3. How important to you personally are each of these potential reasons for protecting threatened and endangered species in New York State? (Check one box for each reason.)

	Not at all important	Slightly important	Moderately important	Very important
They play an important role in nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
So people can have the chance to see these species in the wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
So future generations of New Yorkers can have the chance to see them in the wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
They are important for maintaining biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To know these species exist in the wild	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
They are necessary for the health of the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
They could have benefits for human health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a responsibility to protect them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some are needed for the pollination of plants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is the right thing to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Besides protecting threatened or endangered species, New Yorkers may be concerned about a wide variety of issues and some are more important than others. How important are each of the following issues to you? (Check one box for each issue.)

	Not at all important	Slightly important	Moderately important	Very important
Defending U.S. against terrorism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with problems of poverty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improving the job situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing middle class taxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening the military	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protecting the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dealing with global warming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening nation's economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing budget deficit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing health care costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reducing crime	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How important do you think it is for the government to protect threatened and endangered species in New York State?

- ☐ Not at all important
☐ Slightly important
☐ Moderately important
☐ Very important

6. Before being contacted by us, were you aware that the New York State Department of Environmental Conservation (NYSDEC) has a program to protect threatened and endangered species?

- ☐ Not at all aware (SKIP TO Question 8)
☐ Somewhat aware
☐ Very aware

7. How strongly do you agree or disagree with the following statements about NYSDEC's efforts to protect threatened and endangered species? (Check one box for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
NYSDEC makes good decisions about which species should be protected in New York State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC involves the public adequately when deciding which species to protect in New York State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC makes good decisions when selecting actions to protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC involves the public adequately when selecting actions to protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC devotes enough resources toward protecting threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, I'm satisfied with NYSDEC's efforts to protect threatened and endangered species in New York State	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. When deciding what actions to take to protect or restore threatened and endangered species, how important is it for NYSDEC to consider the opinions of: (Check one box for each group.)

	Not at all important	Slightly important	Moderately important	Very important
Scientists who work with threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental groups like Audubon or The Nature Conservancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The general public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Members of the business community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private landowners who may be impacted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local government officials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. How important is it to protect: (*Check one box for each statement.*)

	Not at all important	Slightly important	Moderately important	Very important
Threatened or endangered <i>mammals</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>birds</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>fish</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>reptiles or amphibians</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>insects</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened or endangered <i>plants</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. How important is it to protect threatened and endangered species if: (*Check one box for each statement.*)

	Not at all important	Slightly important	Moderately important	Very important
The species is threatened or endangered in New York, but common elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is little or no hope that the population will ever recover or become stable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private property owners will be restricted in what they can do on their land in order to protect the species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a species people like to see	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a species people would like to hunt when it is restored	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The species will draw tourists to the state to see it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The species is found mostly in New York State and nowhere else	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It costs a lot to protect the species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is a species people are unlikely to see	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How strongly do you agree or disagree with the following statements about threatened and endangered species? (Check one box for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know
Threatened and endangered species protection should not interfere with a landowner's right to develop property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landowners should not have the right to use their property in ways that endanger a species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Landowners prevented from developing their property because of threatened and endangered species laws should be paid for any lost income by the public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Threatened and endangered species should be protected no matter what the cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is OK to let species become extinct in New York, if they exist elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is OK to let some species become extinct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some species that used to live in New York State can no longer survive here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC understands which factors to consider when deciding what species should be protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I trust NYSDEC to make decisions about which species to protect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC understands how to protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I trust NYSDEC to take actions that will protect threatened and endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC should work on improving habitat for threatened and endangered species on <i>public</i> land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NYSDEC should work on improving habitat for threatened and endangered species on <i>private</i> land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. How strongly would you support each of the following actions to protect threatened and endangered species in New York? *(Check one box for each statement.)*

	Would <u>not</u> support	Slightly support	Moderately support	Strongly support
Having the State buy land to protect habitat for threatened or endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restricting development of areas that are habitat for some threatened and endangered wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fining those who harm threatened and endangered wildlife or their habitats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blocking public access to an area for part of the year to protect a species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closing some public land to all public access to protect a species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restricting landowners from doing things on their properties that might harm threatened or endangered species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talking to the public about how to protect threatened and endangered species at sites where these species live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reintroducing threatened or endangered species to areas where they lived before	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. How many acres of land do you own in New York State?

☐ Do not own any land

☐ < 1 acre

_____ Number of acres

If you do not own land in New York State, please SKIP to Question 17.

14. Would you be willing to follow a conservation plan to maintain habitat for threatened and endangered wildlife on your property?

- ☐ Not at all willing
- ☐ Possibly willing
- ☐ Willing
- ☐ Very willing

15. If you received money, would you be willing to follow a conservation plan to maintain habitat for threatened and endangered wildlife on your property?

- ☐ Not at all willing
- ☐ Possibly willing
- ☐ Willing
- ☐ Very willing

16. Would you support or oppose reintroducing threatened or endangered wildlife to its historical range if it was near to your property?

- ☐ Strongly oppose
- ☐ Possibly oppose
- ☐ Neither support or oppose
- ☐ Possibly support
- ☐ Strongly support

BACKGROUND INFORMATION

17. Have you not been able to go into an area because it was closed to protect threatened or endangered species?

- ☐ No
- ☐ Yes
- ☐ Unsure

18. How strongly do you agree or disagree with the following statements? *(Check one box for each statement.)*

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Humans must live in harmony with nature in order to survive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plants and animals exist primarily to be used by humans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is very delicate and easily upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When humans interfere with nature, it often produces disastrous consequences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans have the right to modify the natural environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humankind was created to rule over the rest of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The best government is the one that governs the least	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most environmental problems can be solved by applying more and better technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Have you participated in any of the following activities in the past year: *(Check all that apply.)*

- ☐ Hiking
- ☐ Camping
- ☐ Boating, either in a motorized or non-motorized boat
- ☐ Watching birds or wildlife
- ☐ Fishing
- ☐ Hunting

20. Is your primary residence: *(Check one.)*

- ☐ Urban ☐ Suburban ☐ Rural

21. What is the highest level of education you have completed?

- ☐ Less than high school
- ☐ High school diploma / G.E.D.
- ☐ Some college or technical school
- ☐ Associate's degree
- ☐ College undergraduate degree (e.g., B.A., B.S.)
- ☐ Graduate or professional degree (e.g., M.S., Ph.D., M.D., J.D.)

22. In general, do you think of yourself as...

- ☐ Very liberal
- ☐ Somewhat liberal
- ☐ Moderate/Middle of the road
- ☐ Somewhat conservative
- ☐ Very conservative

23. Which of the following race or ethnicity categories apply to you? (Check all that apply.)

- ☐ White
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Asian
- ☐ American Indian
- ☐ Other

Please use the space below for any comments you wish to make.

Thank you for your time and effort!

To return this questionnaire, simply seal it with the white removable seal, and drop it in the mail (return postage has been paid).